

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A folding machine with a collect run mode, having a cutting cylinder equipped with cutting blades for cutting a paper web to give cut paper, a folding cylinder provided next to the cutting cylinder and provided with pins for holding the cut paper and folding blades provided with ends projecting slightly from a surface of the folding cylinder surface positioned at a central part of the held cutting paper, and a jaw cylinder next to the folding cylinder provided with a jaw mechanism for holding and supporting a central part of the cut paper made to project by a folding blade, and being capable of switching between a straight run where the jaw cylinder sequentially supports the cut paper and the cut paper is folded and a collect run where two pieces of the cut paper are sequentially overlaid by the folding cylinder and the jaw cylinder sequentially supports and then folds the two overlaid pieces of cut paper, said folding machine with collect run mode comprising:

folding cylinder fixed cam means having a folding cylinder fixed cam of a cam shape for making the pins of the folding cylinder perform a straight run delivery operation;

folding cylinder rotating cam means having a folding cylinder rotating cam provided with covering sections capable of covering a cam shape capable of carrying out a straight run delivery operation of the folding cylinder cam by rotational displacement;

jaw cylinder fixed cam means having a jaw cylinder fixed cam of a cam shape for making the jaw mechanism of the jaw cylinder perform a straight run delivery operation;

jaw cylinder rotating cam means having a jaw cylinder rotating cam provided with covering sections capable of covering a cam shape capable of carrying out a straight run delivery operation of the jaw cylinder cam by rotational displacement;

drive transmission means capable of providing rotational drive to the folding cylinder rotating cam means and the jaw cylinder rotating cam means in order to cause the covering sections of the folding cylinder rotating cam means to rotate at a predetermined rotational speed ratio with respect to rotation of the folding cylinder, and cause the covering sections of the jaw cylinder rotating cam means to rotate at a predetermined rotational speed ratio with respect to rotation of the jaw cylinder; and

switching means for switching drive transmission over between the folding cylinder rotating cam means and the jaw cylinder rotating cam means, wherein an odd number of pins and folding blades of the folding cylinder are provided positioned at equal distances along the direction of the peripheral surface of the folding cylinder surface, and an odd number of jaw mechanisms of the jaw cylinder are provided along the direction of the peripheral surface of the jaw cylinder and operate at an equal frequency.

Claim 2 (Original): The folding machine with a collect run mode as disclosed in claim 1, wherein the folding cylinder fixed cam is provided fixed between a folding cylinder side surface and a frame, and the covering section of the folding cylinder rotating cam are provided between the folding cylinder side surface and the folding cylinder fixed cam so as too be rotatable about a central axis of the folding cylinder, the jaw cylinder fixed cam is provided fixed between the jaw cylinder side surface and the frame, and the covering sections of the jaw cylinder fixed cam are provided between the jaw cylinder side surface and the jaw cylinder fixed cam so as to be rotatable about the central axis of the jaw cylinder.

Claim 3 (New): A folding machine with a collect run mode, comprising:

- a cutting cylinder equipped with cutting blades for cutting a paper web to give cut paper;

- a folding cylinder provided next to the cutting cylinder and provided with pins for holding the cut paper and folding blades provided with ends projecting slightly from a surface of the folding cylinder surface positioned at a central part of the held cutting paper;

- a jaw cylinder next to the folding cylinder provided with jaw mechanisms for holding and supporting a central part of the cut paper made to project by a folding blade, and being capable of switching between a straight run where the jaw cylinder sequentially supports the cut paper and the cut paper is folded and a collect run where two pieces of the cut paper are sequentially overlaid by the folding cylinder and the jaw cylinder sequentially supports and then folds the two overlaid pieces of cut paper;

- a folding cylinder fixed cam for making the pins of the folding cylinder perform a straight run mode operation;

- a folding cylinder rotating cam provided with covering sections capable of covering a cam shape capable of carrying out a straight run delivery operation of the folding cylinder

cam by rotational displacement;

a jaw cylinder fixed cam of a cam shape for making the jaw mechanism of the jaw cylinder perform a straight run delivery operation;

a jaw cylinder rotating cam provided with covering sections capable of covering a cam shape capable of carrying out a straight run delivery operation of the jaw cylinder cam by rotational displacement;

a drive transmission capable of providing rotational drive to the folding cylinder rotating cam and the jaw cylinder rotating cam in order to cause the covering sections of the folding cylinder rotating cam to rotate at a predetermined rotational speed ratio with respect to rotation of the folding cylinder, and cause the covering sections of the jaw cylinder rotating cam to rotate at a predetermined rotational speed ratio with respect to rotation of the jaw cylinder; and

a switching mechanism for switching drive transmission over between the folding cylinder rotating cam and the jaw cylinder rotating cam,

wherein an odd number of pins and folding blades of the folding cylinder are provided positioned at equal distances along the direction of the peripheral surface of the folding cylinder surface, and an odd number of jaw mechanisms of the jaw cylinder are provided along the direction of the peripheral surface of the jaw cylinder, and

wherein the folding machine is configured to prevent a paperless strike of a jaw mechanism of a jaw cylinder during a collect run mode.

Claim 4. (New): The folding machine with a collect run mode of claim 3, wherein the jaw mechanisms of the jaw cylinder operate at an equal frequency.